RAS 8693

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

Louisiana Energy Services, L.P.
National Enrichment Facility

Docket No. 70-3103

ASLBP No. 04-826-01-ML

MOTION ON BEHALF OF PETITIONERS NUCLEAR INFORMATION AND RESOURCE SERVICE AND PUBLIC CITIZEN TO AMEND AND SUPPLEMENT CONTENTIONS

Preliminary statement

This motion is made on behalf of Petitioners Nuclear Information and Resource Service and Public Citizen ("NIRS/PC") pursuant to the schedule contained in the Memorandum and Order of the Atomic Safety and Licensing Board (the "Board"), dated August 16, 2004, authorizing motions to modify or amend contentions to be filed on or before October 20, 2004.

Factual background

In the time since NIRS/PC filed their Petition and the Board issued its ruling admitting certain contentions, additional matters have come to light that should be considered in this licensing proceeding and that bear upon the existing claims. In particular, the U.S. Department of Energy ("DOE") has issued final Environmental Impact Statements ("EISs") regarding deconversion facilities in Paducah, Kentucky, and Portsmouth, Ohio, designed to convert DOE's depleted uranium ("DU") into DU_3O_8 (DOE-EIS-0359 and -0360), the Staff of the Nuclear Regulatory Commission ("NRC Staff") has issued a Draft EIS (NUREG-1790) for the National

Template = SECY-041

SECY-02

Enrichment Facility ("NEF"), the subject of this application, and document production and depositions have taken place. NIRS/PC move to amend their contentions to account for recent developments.

The applicable rule, 10 CFR 2.309(c), calls for discussion of several factors. The factors are as follows:

(i) Good cause for the failure to file on time: The matters raised in proposed new contentions have recently come to the attention of NIRS/PC in discovery in this case or in the environmental impact statements issued by the NRC Staff or by the DOE. Such materials were not available to NIRS/PC at the time the initial Petition was filed, on April 6, 2004, and most have become available very recently.

(ii) Petitioner's right to be made a party: NIRS/PC are parties to this proceeding.

(iii) The nature of the petitioner's interest: The interests of the individual members of NIRS and PC are described in affidavits attached to the Petition. The Commission has determined that NIRS/PC have standing. (Order, May 20, 2004).

(iv) The possible effect of an order on the petitioner's interest: The interests of individual members of NIRS and PC are described in the Petition. The Commission has determined that NIRS/PC have standing. (Order, May 20, 2004). Relief available in this proceeding would protect the interests of Petitioners.

(v) Other means to protect petitioners' interest: No other proceeding would bring the matters identified in this motion to bear upon the possible issuance of a license, and the terms of such license, for the National Enrichment Facility ("NEF").

(vi) Representation of petitioners' interest by existing parties: Petitioners are existing parties. Other intervenors are agencies of the State of New Mexico and respond to different concerns than those that support Petitioners' intervention.

(vii) Possible broadening of issues or delay from petitioners' participation: NIRS/PC are existing parties and believe that the matters set forth in additional contentions will accelerate, rather than delay, this proceeding, since they will tend to simplify and shorten the decision of various issues.

(viii) Possible assistance by petitioner in developing a sound record: NIRS/PC are prepared to present the matters contained in the amended contentions under the existing schedule. NIRS/PC believe that these matters are essential for the Board to consider in its licensing decision and can be dealt with in an orderly manner if the amendments requested herein are granted.

Based upon the information currently available to them, NIRS/PC seek to amend their contentions, adding the contentions set forth herein.

(a) Impacts upon Ground and Surface Water (NIRS/PC EC-1)

NIRS/PC seek to amend the existing contention to read as follows (new matter is in bold):

CONTENTION: Petitioners contend that the Environmental Report contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project on ground and surface water, contrary to the requirements of 10 C.F.R. 51.45.

The Draft Environmental Impact Statement, NUREG-1790 (September 2004)("DEIS") does not contain a complete or adequate assessment of the potential

environmental impacts of the proposed project on ground and surface water, contrary to the requirements of 10 CFR Part 51.

Certain of the deficiencies in the DEIS are the same as those contained in the Environmental Report ("ER"). Based upon studies by an expert hydrologist, George Rice, new bases for contentions with regard to the DEIS are as follows:

A. There is a geologic fault about one mile east of the proposed NEF site (DEIS at 3-26). Information about this fault emerged at the September 17, 2004, deposition of George Harper, witness for LES. One LES contractor, GL Environmental, stated that the fault passes beneath the site. (Harper-Peery dep. ex. 10). NRC has not examined the potential effect of this fault on groundwater flow and contaminant transport. LES's expert witness, Roger Peery, stated that a fault can constitute a fast flow path. (Id. Tr. 100).

B. Earthquakes sometimes occur in the vicinity of the proposed NEF site. (DEIS at 3-27). In 1992 a magnitude 5.0 earthquake occurred, centered 11.0 miles from the site (ER Rev. 2, Table 3.3-3). NRC has not investigated the potential effect of such earthquakes on flow and transport, for example, formation of faults or fractures that may act as fast flow paths.

C. The DEIS correctly notes that leakage from the stormwater detention basin and the septic leach fields will probably cause formation of perched bodies of groundwater at the alluvium/Chinle interface. (DEIS, 4-13, 4-14). The DEIS contains estimates of the dimensions of such water bodies, flow rates, and discharge areas. However, NRC provides no explanation of such calculations, and it is not possible to determine whether they are reasonable.

D. The DEIS does not contain an estimate of the probability and frequency of leakage through the liners of the treated effluent basin or the stormwater detention basin. The basins are to be lined with geosynthetic materials (DEIS at 4-11, 4-12), such liners are known to leak (EPA,

Hydrologic Evaluation of Landfill Performance (HELP) Model, User's Guide for Version 3, EPA/600/R-94/168a, Sept. 1994), and such information is necessary to demonstrate the impact of such leakage. The DEIS should contain an estimate of the leakage rate and should show the fate of water and contaminants that leak from the basins.

E. According to NRC, there is a 100 foot-thick water-bearing sandstone layer at a depth of about 600 feet. (DEIS at 3-36). However, NRC has not answered basic questions about this water-bearing layer, including:

- Does it exist below the proposed site?
- What are the hydraulic properties?
- What is the quality of the water?
- Where does the water discharge?

F. According to the DEIS, "... no precipitation recharge (i.e., rainfall seeping deeply into the ground) occurs in thick, desert vadose zones with desert vegetation (Walvoord et al., 2002)" (DEIS at 3-35). However, cuttings from one of the borings drilled in September 2003 were "slightly moist" (ER Rev. 2 at 3.4-2). In addition, the clay at the bottom of boring B-2 was "moist" (SAR at Fig. 3.2-11). The DEIS should explain the presence of this moisture, which conflicts with its statements about lack of recharge.

G. The DEIS states: "Although the presence of fracture zones that can significantly increase vertical water transport through the Chinle Formation has not been precluded, the low measured permeabilities indicate the absence of such zones." (DEIS at 3-35). Two permeability measurements have been made on the Chinle Formation at or near the site: laboratory measurement of core samples (ER Rev. 2 Table 3.3-2) and a slug test performed in MW-2 (Cook-Joyce, Hydrogeologic Investigation, Sec. 32, T. 21 R. 38, Nov. 19, 2003). Such extremely limited measurements, where faults are present, cannot describe the permeability of the entire site, and NRC should explain its reliance on such restricted data.

H. The DEIS does not state whether the perched zones at the alluvium/Chinle interface will be monitored, if at all.

I. The stormwater basin will discharge runoff containing numerous contaminants, which are not adequately identified in the DEIS, nor is their monitoring explained. LES has stated that the runoff will contain small amounts of oil and grease typically found in runoff from paved roadways and parking areas (RAI Response, May 20, 2004, at 33). However, other contaminants may be present, such as PAHs (USGS, Concentrations of PAHs and Major and Trace Elements in Simulated Rainfall Runoff from parking lots, 2003, Open File Report 2004-1208), other organics such as aliphatic hydrocarbons and alcohols (Barrett, M.E, et al., Review and Evaluation of Literature Pertaining to the Quality and Control of Pollution from Highway Runoff and Construction, Tech. Report CRWR 239, April 1993), and other contaminants from spills and accidents. Their presence should be disclosed. Further, stormwater should be monitored for such contaminants.

(b) Impact upon Water Supplies (NIRS/PC EC-2)

NIRS/PC seek to amend the existing contention to state as follows (new matter is in bold):

> CONTENTION: Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.
>
> To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act "as a trustee of the environment for succeeding generations," according to the National Environmental

Policy Act § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the National Enrichment Facility on groundwater supplies.

The water used at the proposed facility would be pumped from the Hobbs well field (Lea County Underground Water Basin, Ogallala Aquifer) (ER Rev. 2 at 4.4-5). Groundwater in the Basin is being pumped at a rate faster than it is being recharged (Lea County Regional Water Plan, prepared for Lea County Water Users Association, Summary at 1; at 5-4). The DEIS compares the water use of the proposed facility to the amount of water stored in the Ogallala Aquifer in the entire State of New Mexico (DEIS at 4-15). However, NRC has not shown in the DEIS how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.

In simple terms, the DEIS fails to account for the impact of the NEF on the water supply in the area. The DEIS states only the ratios, such as the ratio between the projected water needs of the NEF and the current quantity of water reserves in the part of the aquifer located within New Mexico and the ratio between NEF requirements and system capacities. (DEIS at 4-14, 4-15; Fig. 4-3). Such ratios are irrelevant, since they do not relate to the hydrology of the area. In addition, the DEIS fails to project the impact of the NEF on water supply over the entire operating life of the NEF and to state the actual effect of operation upon aquifer level and other water users.

(c) Depleted uranium hexafluoride storage and disposal (NIRS/PC EC-3/TC-1)

NIRS/PC seek to amend the existing contention to read as follows (new matter in bold):

CONTENTION: Petitioners contend that Louisiana Energy Service, L.P., (LES) does not have a sound, reliable, or plausible strategy for private sector disposal of the large amounts of radioactive and hazardous Depleted Uranium Hexafluoride ("DUF_6") waste that the operation of the plant would produce in that:

(A) The statement (LES Environmental Report (ER) 4.13-8) that a ConverDyn partner, General Atomics, "may have access to an exhausted uranium mine . . . where depleted U_3O_8 could be disposed" represents a grossly inadequate certitude for a "plausible strategy" determination, particularly for a radioactive and hazardous substance which has been accumulating in massive quantities in the United States for fifty-seven years without a plausible disposal program.

(B) Similarly, the statement that "discussions have recently been held with Cogema concerning a private conversion facility" (ER 4.13-8) is without substance.

(C) The disposition of depleted uranium must be addressed based on the radiological hazards of this material that require that it be disposed of in a deep geological repository.

(D) To show that it has a plausible strategy for disposal of depleted uranium, LES must set forth its strategy in sufficient detail so that the cost of pursuing the strategy can be estimated. LES has failed to set forth the strategy of private conversion and disposal with sufficient specificity. LES relies exclusively upon a cost estimate confirmed by Urenco, which estimate fails to describe any deconversion and disposal process relevant to the NEF, because it involves conversion by a process not planned for use in any United States

facility, and it does not involve disposal at all, but only storage of the converted DU_3O_8.

(E) It is not a plausible strategy for LES to propose to transfer DU to DOE under Sec. 3113 of the USEC Privatization Act, since it appears that the DU from the NEF would not be able to be converted in the DOE plants for several decades, and the cost of such conversion cannot be determined.

Concerning basis D, It is established that the requirements for a plausible strategy and for decommissioning cost estimates are closely related: "Thus, in assessing the plausible tails disposal strategy adopted by the Applicant as part of its decommissioning funding plan, we must first determine whether the funding plan contains a reasonable or credible plan to dispose of the DUF_6 tails generated at the CEC and then determine whether the Applicant's cost estimates for the components of the plan are reasonable." *Louisiana Enrichment Services, L.P.* (Claiborne Enrichment Center), LBP-97-3, 45 NRC 99, 105 (1997). Stated otherwise: "For the regulation [on decommissioning costs and funding] to have meaning the cost estimate should contain reasonable estimates for an adequately described decommissioning strategy." In re *Louisiana Energy Services, L.P.* (Claiborne Enrichment Services), LBP-91-41, 34 NRC 332, 338 (1991).

LES in its application made reference to four sources of cost estimates: (a) estimates prepared for the Claiborne Enrichment Center ("CEC") proceeding in 1995, (b) the Lawrence Livermore National Laboratory ("LLNL") analysis prepared in support of the DOE Programmatic EIS in 1997, (c) the Uranium Disposition Services ("UDS") contract, and (d) an estimate confirmed by Urenco. Recently, in deposition testimony, LES has made clear that it does not rely upon estimates (a), (b), or (c) as support for its cost estimate for the actual cost of converting and disposing of DU from the NEF, but only upon its own estimates based upon ill-

explained commercial information. Mr. Krich explained that LES had only cited the earlier three items as examples to look at in observing the reasonableness of the estimate on which LES actually relies: the $5.50 estimate. He testified as follows:

> MR. LOVEJOY: Are you going to be testifying about previous estimates which were incorporated somehow in the 5.50 estimates? Is that going to be your area also?
> MR. KRICH: What I will be testifying about is how LES did not rely on the previous cost estimates but used them to inform our estimate of $5.50 per kilogram uranium.
> MR. LOVEJOY: So it's your testimony that LES did not use the cost estimates from the Claiborne proceeding or from the Lawrence Livermore report or from the LES contract in arriving at the 5.50 estimate?
> MR. KRICH: My testimony would be that we did not rely on the three estimates that you just named. (Tr., Oct. 4, 2004, at 104-05)

Mr. Krich testified, further, that the CEC estimate, the LLNL report, and the UDS contract were used only to "inform our cost estimate" (Tr. 125), rather than to provide a basis for a cost estimate. (Tr. 126, 127). In addition, the Urenco cost estimate is unsupported by any contract or other data and relates to conversion and storage in Europe, not disposal of waste in the United States. (Tr., Oct. 4, 2004, at 52, 61, 105, 196).

Mr. Krich stated later that he thought that the estimate of $5.50 offered a substantial margin above the cost that LES would pay for conversion and disposal of DU. (Tr., Oct. 8, 2004, at 95-111). However, Mr. Krich stated that LES had not, in fact, quantified the cost for dispositioning DU:

> MR. KRICH: We have estimated a cost of $5.50 for disposing of the depleted Uranium.
> MR. LOVEJOY: Okay. I thought you said a minute ago that the $5.50 is substantially higher than what is needed.
> MR. KRICH: Based on a review of today's costs.
> MR. LOVEJOY: Is that so?
> MR. KRICH: Is that so?
> MR. LOVEJOY: Is it so that in your view, $5.50 is substantially higher than what is needed?
> MR. KRICH: That's our view, yes.
> MR. LOVEJOY: Okay. What is needed?
> MR. KRICH: Somewhat less than $5.50.

MR. LOVEJOY: How much?
MR. KRICH: We didn't quantify that. (Tr., Oct. 8, 2004, at 96-97).

In response to further questions, Mr. Krich would not state the dollar amount that LES had estimated for deconversion, nor the amount that LES had estimated for disposal. (Tr., Oct. 8, 2004, at 103-109). Further, it became clear that LES had not identified specific suppliers of such services. (id.).

Based upon this recent testimony, NIRS/PC wish to advance the contention that LES has not satisfied the requirements for a plausible strategy nor for a decommissioning cost estimate, because there is no "reasonable or credible plan to dispose of the DUF_6 tails" that the Commission could examine and find valid, and no plan for which the Commission could establish the cost and require financial assurance.

Concerning basis E, NIRS/PC already has pending the contention that depleted uranium from the NEF would not constitute low-level radioactive waste within the meaning of Sec. 3113 of the USEC Privatization Act. In addition, from analyses contained in the DEIS, it now appears that the DOE conversion plants planned for Paducah, Kentucky, and Portsmouth, Ohio, would not be available to accept DU from the NEF for many years.

The DEIS for the NEF includes a schedule for generation of DUF_6 (at 2-17) and states that all DUF_6 would be disposed of before the site is decommissioned (at 2-27), which is projected to occur in 2036 (at 2-2). The DEIS also states that UBCs containing DUF_6 would be temporarily stored on the UBC Storage Pad until a conversion facility is available, and storage of UBCs could continue for up to 30 years on the UBC Storage Pad (at 4-52). The Paducah plant is scheduled to operate for about 25 years beginning in 2006, and the Portsmouth plant is scheduled to operate for about 18 years beginning in 2006, in deconverting DUF_6 generated by the DOE gaseous diffusion plants. (at 4-55, 4-56). Thus, the Paducah plant would be occupied in

converting DOE waste until 2031; and the Portsmouth plant would be occupied in converting DOE waste until 2024. The Portsmouth plant would probably also convert DU from the proposed USEC American centrifuge plant, and its availability to convert NEF DU is doubtful. The DEIS also states that the proposed maximum DUF_6 inventory for the NEF, if processed at DOE facilities, could extend the time of operation of the Paducah facility for 11 years or the Portsmouth facility for 15 years. (at 4-56). The Paducah EIS states that the operation of that plant could be further extended for three years, if DUF_6 from Oak Ridge, Tennessee, is shipped to Paducah. (EIS 0359, at 1-11). With such a schedule, conversion of the DUF_6 from the NEF would commence at Paducah in 2031 or 2034 and continue until 2042 or 2045—well after the scheduled decommissioning date for the NEF. NIRS/PC submit that a strategy that cannot begin to be implemented until 2031 or 2034, the cost of which cannot credibly be estimated, is not "plausible."

(d) Impacts of waste storage and disposal (NIRS/PC EC-4)

NIRS/PC seek to amend the existing contention to read as follows (new matter in bold):

CONTENTION: Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgment, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride ("UF_6") waste that is required in conjunction with the proposed enrichment plant.

The DEIS fails to discuss the environmental impacts of the construction and operation of a conversion plant for the depleted uranium hexafluoride waste. The DEIS entirely relies upon final EISs issued in connection with the construction of two conversion plants at Paducah, Kentucky, and Portsmouth, Ohio, that will convert the Department of

Energy's inventory of depleted uranium (DEIS at 2-28, 2-30, 4-53, 4-54). Such reliance is erroneous, because the DOE plants are unlike the private conversion plant contemplated by LES.

The DEIS contains an incorrect analysis of the environmental impacts of the disposal of depleted uranium hexafluoride waste. The DEIS assumes that depleted uranium may be disposed of as low-level waste, which is incorrect. The DEIS fails to recognize the Commission's stated position that depleted uranium is not appropriate for near-surface disposal. The DEIS fails to support or explain the modeling of disposal of depleted uranium.

The amended contentions concern the analyses in the DEIS of the environmental impacts of conversion and disposal. Specifically, as to conversion, the DEIS analysis is insufficient for these additional reasons:

A. LES has chosen to focus its planning for a private conversion facility on a process different from the process to be used in the DOE plants. LES will adopt a process that generates anhydrous hydrofluoric acid ("AHF") (see LES Answer to Petitions of NIRS/PC and New Mexico Attorney General, May 3, 2004, at 72). The process discussed in the EISs for the Paducah and Portsmouth conversion plants is a different one, which generate aqueous HF and calcium fluoride (CaF_2) (See Paducah EIS, DOE-0359, at S-19, 1-18; Portsmouth EIS, DOE-0360, at S-17, 1-19).

Thus, the facilities and processes analyzed in the conversion plant EISs do not fully correspond to the configuration proposed for construction by LES. In particular, the use of a distillation process to upgrade the HF resulting from the conversion process to AHF is not considered in the EIS for either the Paducah or Portsmouth facilities. In addition, when the

engineering analysis for these proposed facilities was conducted, the distillation option was not even commercially developed. The Draft Engineering Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride - Rev. 2, Lawrence Livermore National Laboratory (LLNL)(1997), which is included as supporting material to the conversion plant EISs, states:

> Distillation is a common industrial process and was the design basis for this suboption. The processing of the azeotrope and the process parameters for the conversion reactors were patterned after the General Atomics/Allied Signal response to the RFR and the Sequoyah Fuels Corp. patented process. This representative process has not been industrialized, but the initial research and development have been completed. (J.W. Dubrin et. al., "DEPLETED URANIUM HEXAFLUORIDE MANAGEMENT PROGRAM: The Engineering Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride Volume I", Lawrence Livermore National Laboratory, May 1997 (UCRL-AR-124080 Vol. 1 Rev. 2), at 3-8.

Therefore, the EISs for the DOE plants do not consider the impacts of the distillation process chosen by LES to generate AHF, nor the safety aspects of such operation, nor the impacts of sale, transportation, and use of AHF. The distillation process is not commercially established and projection of its impact will be speculative.

B. The conversion plant for the DUF6 from the NEF would have much smaller scale than the DOE plants, creating different economics of operation and needed rates of return. The LLNL Report specifically estimates that a conversion plant of the size contemplated by LES—approximately 7,000 metric tons per year—would have costs nearly as high as the cost of operating a plant with a throughput of 28,000 tons per year. (Hatem Elyat et al., "Cost Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride," UCRL-AR-127650, at Table 6.4 (May 1997)). The prospect of a high-cost facility raises the question what cost reductions will be attempted, and at what price to safety and the environment.

Further, as to the impacts of waste disposal, the DEIS analysis is insufficient for the following reasons:

A. The DEIS states that depleted uranium may be disposed of as Class A low-level waste. (DEIS at 2-27, 2-31). This is erroneous, because the Commission has not ruled that depleted uranium constitutes low-level waste. It is also erroneous, because the Commission's adoption of 10 CFR Part 61 included no analysis of the environmental impact of disposal of depleted uranium as low-level waste, and the Commission could not lawfully decide that such disposal is permissible without undertaking a full environmental impact analysis. Further, NIRS/PC have previously explained, in support of contention NIRS/PC EC-3/TC-1, that depleted uranium should be managed and disposed of in accordance with rules applicable to Greater than Class C waste, not low-level waste.

B. The DEIS fails to recognize the Commission's repeatedly stated position that depleted uranium is not appropriate for near-surface disposal. The CEC Final EIS concluded that near-surface disposal of DU_3O_8 would not comply with 10 CFR Part 61 and suggested some form of deep disposal. (CEC Final EIS at 4-67). In 1995, during the scoping process for DOE's Programmatic EIS concerning long-term management of DU, NRC stated that large quantities of DU_3O_8 such as those derived from the DOE enrichment tailings inventory suggest the need for a unique disposal facility, such as a mined cavity or exhausted uranium mine. See Croff, A.G., et al., Evaluation of the Acceptability of Potential Depleted Uranium Hexafluoride Conversion Products at the Envirocare Disposal Site, ORNL/TM-2000/355, at 12 (Dec. 2000). On October 18, 2000, in commenting on the DOE Roadmap for management of DU, the Commission stated that "[s]hallow land (near-surface0 disposal was not a likely option because a generic performance assessment indicated the dose requirements of 10 CFR Part 61 could be exceeded

by a wide margin." (Letter, E. Leeds, NRC, to Depleted Uranium Hexafluoride Management Program, DOE, Oct. 18, 2000). The DEIS for the NEF fails to account for the NRC's repeated positions on the subject of disposal of DU and simply assumes that disposal may occur at a near-surface site. An explanation of such a change in agency position is required.

C. The DEIS attempts to estimate the impact of disposal of depleted uranium from the NEF in its modeling of the releases expected from the site. (at 4-58, 4-59 and Table 4-19). The DEIS fails to disclose the models used or the parameter values. The text suggests that models used in analyzing the CEC site were used; however, the results are unlike any reported in connection with the CEC facility. Further, the model addresses only two hypothetical disposal sites and fails to examine any actual location of disposal. Performance of a disposal site is highly site-specific.

(e) Decommissioning costs (NIRS/PC EC-5/TC-2; AGNM TC-i)

NIRS/PC seek to amend the existing contention to read as follows (new material in bold):

CONTENTION: Louisiana Energy Services, L.P., (LES) has presented estimates of the costs of decommissioning and funding plan as required by 42 U.S.C. 2243 and 10 C.F.R. 30.35, 40.36, and 70.25 to be included in a license application. See Safety Analysis Report 10.0 through 10.3; ER 4.13.3. Petitioners contest the sufficiency of such presentations as based on (1) a contingency factor that is too low; (2) a low estimate of the cost of capital; and (3) an incorrect assumption that the costs are for low-level waste only.

The DEIS similarly states that the depleted uranium will be low-level radioactive waste, which is incorrect, and results in an incorrect and low estimate of disposal costs. (DEIS at 2-27, 2-31).

NIRS/PC here seeks to update the contention, stating that the inadequacy of the decommissioning (i.e., including disposal) cost estimate, based upon the assumption that the DU is low-level waste, is perpetuated by the DEIS, which likewise assumes that the DU would be low-level radioactive waste. The DEIS clearly makes that assumption. (DEIS at 2-27, 2-31).

(f) Costs of management and disposal of depleted UF_6 (NIRS/PC EC-6/TC-3).

NIRS/PC seek to amend the existing contention to state as follows (new matter in bold):

CONTENTION: Petitioners contend that the Louisiana Energy Services, L.P., (LES) application seriously underestimates the costs and the feasibility of managing and disposing of the Depleted Uranium Hexafluoride ("DUF_6") produced in the planned enrichment facility in that:

(A) LES's reliance on the Lawrence Livermore National Laboratory (LLNL) Report as a basis for LES's cost estimate for deconversion and disposal is not justified given the report states its cost estimates as medians.

B) LLNL cost estimates are based on travel distances of 1000 kilometers or 620 miles (§ 4.1.3, at 37; id. 92), but the data presented in the LES application show that travel over 1000 miles would be required to convert the DUF_6 at Paducah, Kentucky or Portsmouth, Ohio, and travel of an additional 1000 miles (Environmental Report (ER) Table 4.13-1) would be required to get the material to a disposal site.

(C) In LLNL's projections of the cost of decommissioning, it is assumed that materials such as steel used in the construction could be recycled. (See ER 4.13-17). Thus, it is assumed that such material would not constitute waste. However, such an assumption cannot be made.

(D) Significant revenues are assumed from the sale of calcium difluoride ("CaF_2")–$11.02 million per year (ER 4.13-17, Table 4.13-2; LLNL Report at 50). These assumptions are unfounded and cannot be incorporated in the calculation of the cost of decommissioning.

(E) A problem arises with respect to disposal of CaF_2. It is not known whether the CaF_2 will be contaminated with uranium. Such contamination would prevent the resale of the CaF_2 and would require that such material be disposed of as low-level waste.

(F) There is an even more significant risk that the magnesium difluoride ("MgF_2") would also be contaminated. The LLNL report states that MgF_2 generated in decommissioning may be contaminated. (§ 6.3.2, at 119). Such contamination would require that such material be disposed of as radioactive waste. Such disposal would raise the cost of decommissioning by more than $400 million. (See Table 6.17, at 120).

(G) LES's "preferred plausible strategy" for the disposition of depleted UF_6 is the possible sale to a "private sector conversion facility" followed by disposal of deconverted U_3O_8 in a "western U.S. exhausted underground uranium mine." (ER 4.13-8). Such a conversion strategy cannot be accepted as plausible given that no such conversion facility exists nor is it likely to be built to suit LES's timing and throughput requirements.

(H) The mine disposal option advanced by LES (ER 4.13-11) cannot be considered plausible given the single mine identified in the application

opposes use of its property and storage of the waste in such a mine will not be realistically approvable if DUF_6 is not considered low-level waste.

(I) The "engineered trench" method of waste disposal proposed by LES is not likely to be acceptable (ER 4.13-11, -19) if DUF_6 is not considered low-level waste.

(J) In fact, LES does not have any relevant estimate for the cost of converting and disposing of depleted uranium, because it does not rely upon the three examples cited in the application, i.e., the CEC estimate from 1993, the LLNL Report, or the UDS contract. LES would not supply any estimate for dispositioning costs based on commercial contacts. LES refers only to the Urenco data from 2003 for its decommissioning and disposal cost estimate, and Urenco data are not relevant to establishment of costs in the United States.

Concerning basis J, the new matter is based upon the testimony, quoted above, stating that LES does not rely upon the examples of DUF_6 dispositioning cost estimates contained in its application to support its estimate of the cost of converting and disposing of depleted uranium. Thus, Mr. Krich explained that LES had only cited the three items—the CEC estimate, the LLNL Report, and the UDS contract—as examples to look at in observing the reasonableness of the estimate on which LES actually relies: the $5.50 estimate. (Tr., Oct. 4, 2004, at 104-05). In a later deposition, Mr. Krich would not offer the specific amount that LES regarded as the cost for dispositioning DU. (Tr., Oct. 8, 2004, at 96-97). Mr. Krich would not state the dollar amount that LES had estimated for deconversion, nor the amount that LES had estimated for disposal. (Tr., Oct. 8, 2004, at 103-109).

As for the Urenco data, the contract supporting the Urenco estimate has not been made available. Moreover, the Urenco data are strictly based on European experience, have not been adjusted for currency changes, and do not involve disposal—only surface storage. (Tr., Oct. 4, 2004, at 52, 61, 105, 196).

Based upon this recent testimony, NIRS/PC wish to contend that the costs of management and disposal of depleted UF_6 contained in the application have no support, since there is no credible cost information about a deconversion facility or a disposal facility that LES could actually use.

(g) Need for the facility (NIRS/PC EC-7)

NIRS/PC seek to amend the existing contention to state as follows (new matter in bold):

CONTENTION: Petitioners contend that the Environmental Report (ER) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (See ER 1.1.1 et seq.) in that:

(A) Louisiana Energy Services, L.P.'s (LES) presentation erroneously assumes that there is a shortage of enrichment capacity.

(B) LES's statements of "need" for the LES plant (ER 1.1) depend primarily upon global projections of need rather than projections of need for enrichment services in the U.S.

(C) LES has referred to supply and demand in the uranium enrichment market (ER 1.1), but it has not shown how LES would effectively enter this market in the face of existing and anticipated competitors and contribute some public benefit.

The DEIS likewise omits to discuss the impact of the proposed NEF, in particular upon the market for enrichment services, by failing to consider the effect of the addition of the NEF to the existing range of suppliers and other forthcoming suppliers, the nature of competition that will occur, and the impacts upon market participants and consumers.

By the addition to this contention, NIRS/PC will demonstrate that the cursory treatment in the DEIS (at 1-2 through 1-5) of the need for the facility fails to grapple with the question of the existence of a demand, at a price level, for the product of the NEF and the impact that addition of the NEF to the existing and anticipated roster of competitors will have upon the enrichment market. It must be emphasized that the contention does not involve the profitability or business success of the proposed NEF. Rather, the issue here is the sufficiency of the EIS analysis of the costs and benefits of introducing the NEF into the market for enrichment services and all who are affected by it—competitors, utilities, and consumers. The EIS for the proposed facility should discuss whether the construction of the NEF is actually likely to result in "diversity and security of supply" (DEIS at 1-5) or, rather, lead the enrichment market further down the path of dominance by a few large producers. (See Sheehan Declaration, attached to NIRS/PC motion to compel, Oct. 8, 2004).

Conclusion

As the parties prepare for hearing, it is important that this licensing case include matters recently identified as relevant to the issuance of a license or to the terms of that license. Addition of the new matter will not seriously lengthen this proceeding and will clarify the issues and guide the Board in its decision. NIRS/PC request that the admitted contentions be amended to include the new matter set forth above.

Respectfully submitted,

Lindsay A. Lovejoy, Jr.
618 Paseo de Peralta, Unit B
Santa Fe, NM 87501
(505) 983-1800
(505) 983-0036 (facsimile)
E-mail: lindsay@lindsaylovejoy.com

Counsel for Petitioners
Nuclear Information and Resource Service
1424 16th St., N.W. Suite 404
Washington, D.C. 20036
(202) 328-0002

and

Public Citizen
1600 20th St., N.W.
Washington, D.C. 20009
(202) 588-1000

October 20, 2004

CERTIFICATE OF SERVICE

Pursuant to 10 CFR § 2.305 the undersigned attorney of record certifies that on October 20, 2004, the foregoing Motion on behalf of Petitioners Nuclear Information and Resource Service and Public Citizen to Amend and Supplement Contentions was served by electronic mail and by first class mail upon the following:

G. Paul Bollwerk, III
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: gpb@nrc.gov

Dr. Paul B. Abramson
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: pba@nrc.gov

Dr. Charles N. Kelber
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
e-mail: cnk@nrc.gov

James Curtiss, Esq.
David A. Repka, Esq.
Winston & Strawn
1400 L St.
Washington, D.C. 20005-3502
e-mail: jcurtiss@winston.com
drepka@winston.com
moneill@winston.com

John W. Lawrence
Louisiana Energy Services, L.P.
2600 Virginia Ave., N.W.
Suite 610
Washington, D.C. 20037
e-mail: jlawrence@nefnm.com

Office of the General Counsel

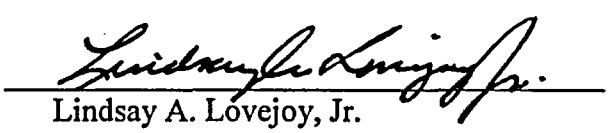
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Associate General Counsel for Hearings, Enforcement, and Administration
e-mail: OGCMailCenter@nrc.gov
lbc@nrc.gov
abc1@nrc.gov

Office of Commission Appellate Adjudication
Mail Stop O-16C1
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Tannis L. Fox, Esq.
Deputy General Counsel
New Mexico Environment Department
1190 St. Francis Drive Santa Fe, NM 87502-1031
e-mail: tannis_fox@nmenv.state.nm.us

Glenn R. Smith, Esq.
Deputy Attorney General
Christopher D. Coppin, Esq.
Stephen R. Farris, Esq.
David M. Pato, Esq.
Assistant Attorneys General
P.O. Drawer 1508
Santa Fe, NM 87504-1508
e-mail: ccoppin@ago.state.nm.us
dpato@ago.state.nm.us
gsmith@ago.state.nm.us
sfarris@ago.state.nm.us

Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Rulemakings and Adjudications Staff (original and two copies)
e-mail: hearingdocket@nrc.gov



Lindsay A. Lovejoy, Jr.
618 Paseo de Peralta, Unit B
Santa Fe, NM 87501
(505) 983-1800
(505) 983-0036 (facsimile)
e-mail: lindsay@lindsaylovejoy.com